

描述 / Descriptions

SOT-23 塑封封装 P 沟道场效应管。
P-CHANNEL MOSFET in a SOT-23 Plastic Package.

特征 / Features

低开启电压, C-MOS 和 TTL 等电路的直接接口, 开关速度快, 防静电能力 1000V, 符合 AEC-Q101 标准高可靠性要求, 无卤产品。

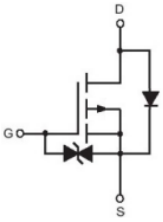
Low threshold voltage, Direct interface to C-MOS, TTL etc, High-speed switching, ESD Improved Capability 1000V, high current, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

用途 / Applications

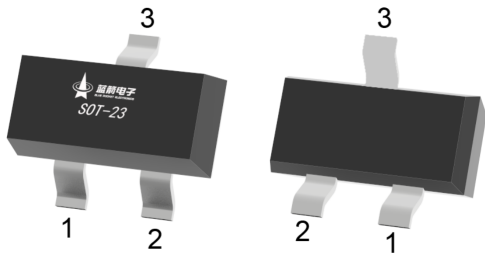
用于电话机中的线性电流断续器, 继电器, 高速线性变压器驱动, 满足汽车应用的严格要求。

Line current interrupter in telephone sets, Relay, High speed and line transformer drivers, Meet the stringent requirements of automotive applications.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 : G

PIN 2 : S

PIN 3 : D

印章代码 / Marking

Marking	QSP
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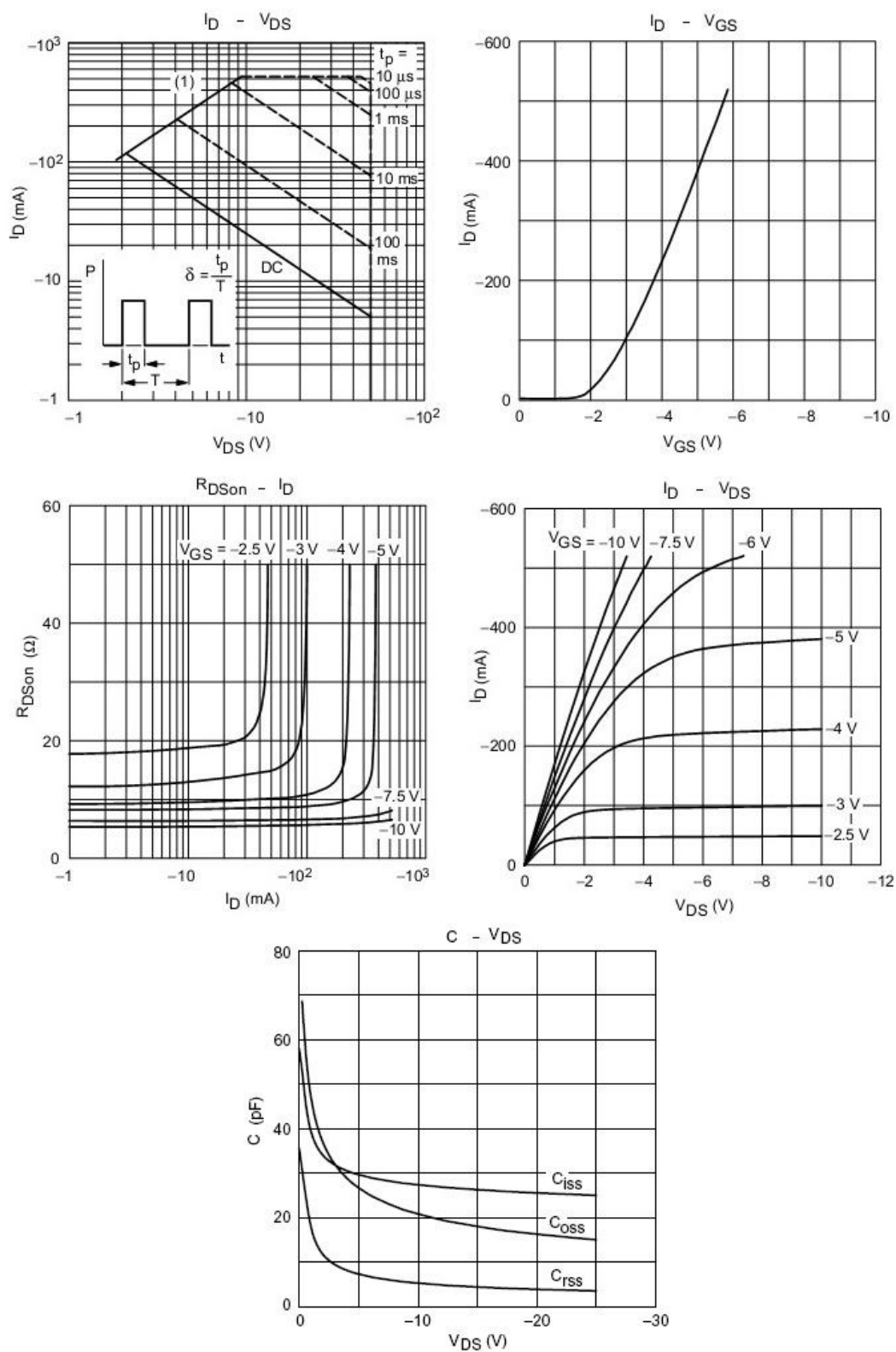
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Drain-Source Voltage	V _{DSS}	-50	V
Drain Current – Continuous	I _D	-130	mA
Peak Drain Current	I _{DM}	-520	mA
Gate-Source Voltage	V _{GSS}	±20	V
Thermal Resistance, Junction-to-Ambient	R _{θJA}	500	°C/W
Storage Temperature Range	T _{stg}	-65 to 150	°C
Junction Temperature Range	T _j	150	°C

电性能参数 / Electrical Characteristics(Ta=25°C)

参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Drain–Source Breakdown Voltage	V _{DSS}	V _{GS} =0V I _D =-10μA	-50			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} I _D =-250μA	-0.8		-2.0	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{GS} =0V V _{DS} =-40V			-100	nA
		V _{GS} =0V V _{DS} =-50V			-10	μA
		V _{GS} =0V V _{DS} =-50V T _j =125 °C			-60	μA
Gate–Body Leakage.	I _{GSS}	V _{DS} =0V V _{GS} =±20V			±10	μA
Static Drain–Source On–Resistance	R _{DS(on)}	V _{GS} =-10V I _D =-130mA		1.8	5	Ω
Forward Transconductance	G _{FS}	V _{DS} =-25V I _D =-130mA	50			mS
Input Capacitance	C _{iss}	V _{DS} =-25V V _{GS} =0V f=1.0MHz		25	45	pF
Output Capacitance	C _{oss}			15	25	
Reverse Transfer Capacitance	C _{rss}			3.5	12	
Turn–On Time	t _{on}	V _{GS} =0V~-10V V _{DD} =-40V I _D =-200mA		3		ns
Turn–Off Time	t _{off}	V _{GS} =-10V~0V V _{DD} =-40V I _D =-200mA		7		

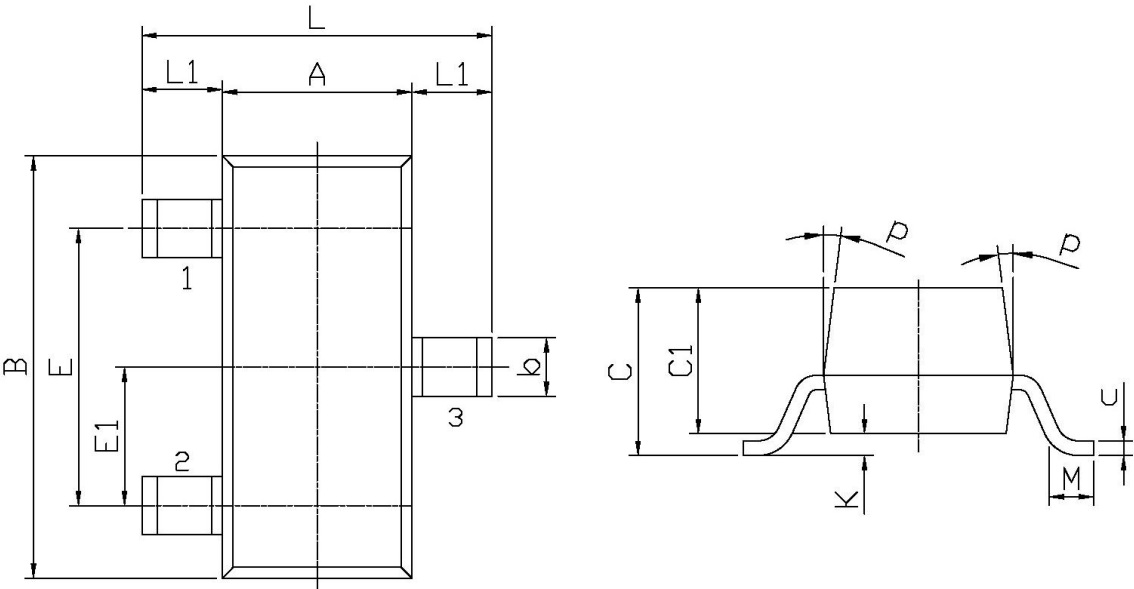
电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

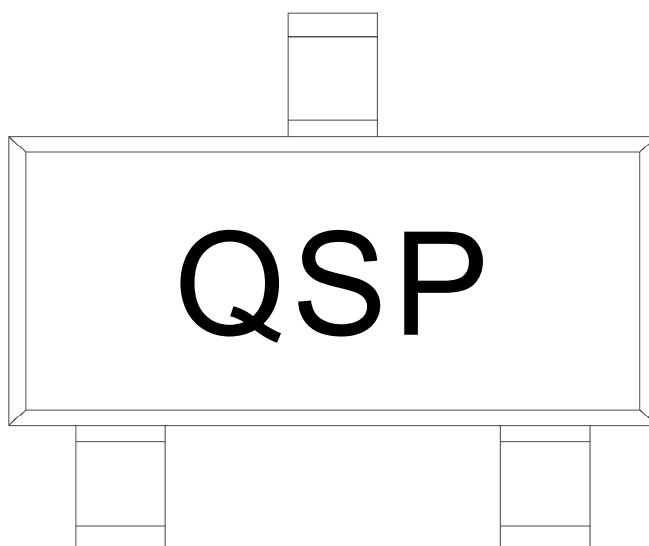
SOT-23

单位：mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	
L1	0.45	0.65	C1	0.90	1.20
A	1.15	1.50	c	0.05	0.20
B	2.70	3.10	K	0	0.10
E	1.70	2.10	M	0.20MIN	
E1	0.85	1.05	P	7°	
b	0.35	0.55			

印章说明 / Marking Instructions



说明：

Q： 为汽车无卤产品标识

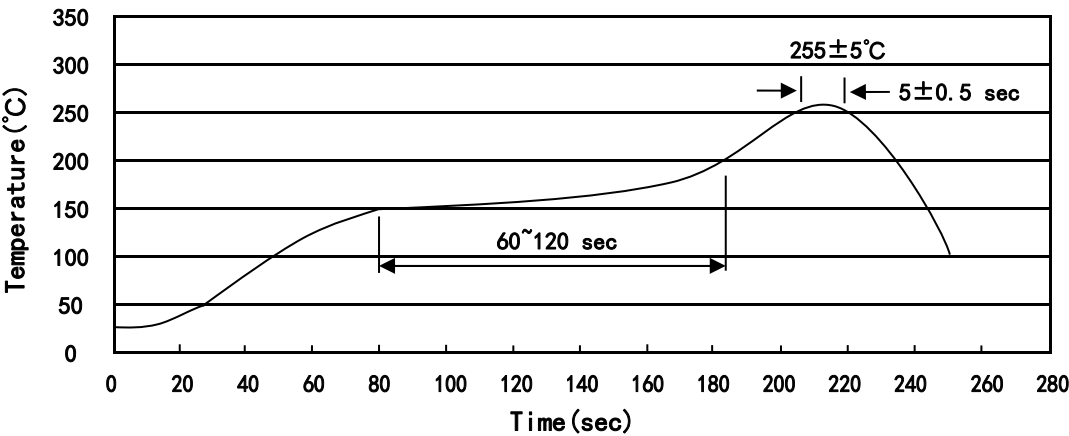
SP： 为型号代码

Note:

Q: Automobile halogen-free product Code

SP: Product Type.

回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)



- 说明 :
- 1、预热温度 150 ~ 200°C , 时间 60 ~ 120sec;
 - 2、峰值温度 255±5°C , 时间持续为 5±0.5sec;
 - 3、焊接制程冷却速度为 2 ~ 10°C/sec.
- Note:
- 1.Preheating:150~200°C, Time:60~120sec.
 - 2.Peak Temp.:255±5°C, Duration:5±0.5sec.
 - 3.Cooling Speed: 2~10°C/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度 : 260±5°C 时间 : 10±1 sec. Temp.:260±5°C Time:10±1 sec

包装规格 / Packaging SPEC.

卷盘包装 / REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
SOT-23	3,000	10	30,000	6	180,000	7" ×8	180×120×180	390×385×205

使用说明 / Notices